watersystem_pc

Location: infrastructure\watersystem_pc

Description
Water distribution system in the City of Panama City service area, represented by 11 feature classes of which 7 are point features and 4 are line features. The system is designed in a feature dataset within a geodatabase for utility department use and later feature classes exported to shapefiles for other staff use. Point features include Fire hydrants (wHydrant), Valves (wSystemvalve), Fittings (wFitting), Master meters (wWholesaleMeter), Sampling stations (wSamplingstation), Service meters (wMeter), and other Service features (wLateralPoints). Line features include: Distribution Mains (wDistributionMain), FireLines (wFireLine), Transmission Lines (wTransmissionMain), and service lines (wLateralLine). This data is used in the city's custom utility software, Cityworks. There are a number of required fields that were included in the system's attribute fields for use with Cityworks and some can only be filled when using cityworks. The system remains as a **work-in-progress.**

Coordinate system: State Plane, Florida North Zone, Datum NAD83, US survey feet (see **.prj** file)

Source
This layer was created by Panama City GIS in geodatabase format using ArcGIS software. Source data used include hardcopy as-builts from the Engineering and Utilities departments, draft forms from the Utilities Dept, digital as-builts from the Engineering Dept, words of mouth from Utilities and Engineering staff familiar with the field information, and a hardcopy water distribution map-book from the Engineering Dept. Updates and new findings of all the system features that are visible on the surface are field verified with a GPS unit before being mapped.

The locational accuracy of all layers depends on the accuracy of the reference layers like the base map (road centerlines), aerial photos and the as-builts used as the information source. In some areas, features were created referenced on what was considered a more accurate layer than the other, that layer being the Kucera aerial photos taken 1998. Although the map looks complete, ***there is still a lot of information in the field that will need to be verified***. There has been a lot of discrepancies in the source data that needs to be clarified from the field. New line installations, repairs and updates of existing lines are all field verified with a GPS before information is added. Having searched through old files dated as far back as the 1950s, it may have led to the inclusion of lines that may or may not be operating. ***Proper review of the entire map over time will ensure accurate attribution of all the features*** in question. The system is a **work-in-progress**.

Most of the features have been populated with the corresponding attribute information. This will be an on-going process because many as-builts lacked the needed information thus leaving gaps in the database. Feature device information will also need to be populated as features are installed or repaired. There is a need to determine which valves are operating and ones that aren't - a process already in progress as of March 2004. This is important because the system's tracing relies entirely on the valve status and/or pressure zone traces.

This data is provided with the understanding that the conclusions drawn from such information are solely the responsibilities of the user. The GIS data is not a legal

representation of the features depicted, and any assumption of the legal status of this data is hereby disclaimed. Errors or omissions should be reported to the Panama City GIS 850-872-3064.

Note: All features (POINTS AND LINES) have some field names and data type that are similar. Reference to the field should be made to that field definition with the same name.

Arc Attribute Table Fields

Item Name	Length	Type
FACILITY_ID	20	C
PWTYPE	8	C
DIAMETER		D
MATERIAL	5	C
LOCATION	100	C
MUNICIPALI	25	C
OPERATING_	20	C
DEPTH_OF_M	-	D
LAST_STATUS	20	C
DATE_INSTA	-	L
ASBUILT_RE	50	C
WARRANTYDATE	-	DATE
LEGACYID	20	C
CONDITION	10	C
CONDITIONDATE	-	DATE
INSTALLDATE	-	DATE
DATEMODIFIED	-	DATE
ADMINISTRATIVEAREA	5	C
OPERATIONALAREA	5	C
LIFECYCLESTATUS	5	C
WATERTYPE	5	C
DRAWINGNUMBER	255	C
ENGINEER	255	C
PROJECTNUMBER	255	C
SOURCE	255	C
CONTRACTOR	20	C
COMMENT	20	C
EXTERIORCOATING	20	C
LININGTYPE	20	C
PIPECLASS	20	C
GROUNDSURFACETYPE	20	C
PRESSURERATING	20	C
WORKREQUESTID	20	C
DESIGNID	20	C
WORKLOCATIONID	20	C
WORKFLOWSTATUS	-	L
WORKFUNCTION	-	L
IN TRANSMISSION MAIN		
WATERTYPE	5	C
IN LATERAL LINE		

TYPE	10	C

POINT Attribute Table Fields (for some fields not listed, see above LINE table list, has same field definition)

Item Name	LENGTH	Type
IN FITTING AND OTHER FEATURES		
FITTING	10	C
TYPE	5	C
SIZE	10	C
MATERIAL	10	C
MANUFACTUR	20	C
MAKE	20	C
DEFECT	35	C
MAIN_DIAME	17	C
IN FIREHYDRANT FEATURE		
PRESSURE_S	12	C
NOMINAL_PR	17	C
STATIC	4	F
RESID		F
PITOT		F
PITOT_2		F
PRESS_20_P		F
PRESS_10_P		F
PRESS_0_PS		F
GPM	10	C
DATE	10	C
TIME	10	C
SITE	20	C
DIRECTION	8	C
STATION	8	C
ZONE	8	C
MARKER	8	C
STEAMER	8	C
SERVICE_CO	10	C
BARRELDIAMETER		D
NOZZLEDIAMETER1		D
NOZZLEDIAMETER2		D
NOZZLEDIAMETER3		D
NOZZLEDIAMETER4		D
OUTLETCONFIGURATION	20	C
SEATDIAMETER		L
OPENING	20	C
HOSECONNECTOR	20	C
STEAMERCONNECTOR	20	C
HYDRANTNUMBER		L
COLOR	16	C
YR_MFG	8	C

VALVE_VISIBLE	5	C
IN METER FEATURE		
LOCATIONDESCRIPTION	255	C (also in watersampling sites feature)
GPS_DATE		DATE
IN SAMPLING STATION		
DESIGNATIO	35	C
ROUTE_NO	5	C
IN SYSTEM VALVES		
CROSSOVERVALVE		L
CLOCKWISETOCLOSE		L
MOTORIZED		L
NORMALLYOPEN		L
PRESSURESETTING	20	C
TURNSTOOPEN		L
IN WHOLESALE METERS		
METERTYPE	5	C
FLOWRANGE	20	C
MEASUREMENTDATE		DATE

Arc Attributes defined

FACILITY_ID
This is a user defined -ID given to a feature and used in Cityworks.

PWTYPE
This is a Cityworks code that specifies the system feature line or point type:
LINES
WMAIN = water main lines
WHYDLIN = water hydrant lines
WSVCMAIN = water service lines
WFIRELIN = water fire lines
POINTS
WFIREHYD = water fire hydrant
WFLOMETR = water flow/service meter
WMSTMETR = water master/wholesale meter
WNODE = water pipe reducer/or feature info known but not specified yet
WPIPEFIT = water pipe fitting
WTANK = water tank
WTREATPL = water treatment plant
WVALVE = water valve
blank = unspecified (only a few)

LEGACYID
The unique historic identification of the feature.
DIAMETER
The inside diameter of the main pipe in inches: 0, 0.75 - 30
DEPTH_OF_M

The distance below surface of the pipe.

MATERIAL

LINES

The construction material of the pipe: CI, DI, DIP, GS, GV, PVC, PVC C-900, PVC-SCH 40, or blank

CI or CIP= cast iron pipe
COP = copper
DI or DIP= duct iron pipe
GS =
GV = galvanized
PVC = polyvinyl chloride
UK = unknown
UNK = unknown / not specified
Null = unknown

POINT

Material of the fitting or other points (no codes established yet)

JOINT_TYPE

The type of joint between pipe lengths. i.e, MJ = Mechanical Joint

CORROSION_

Method of corrosion control for the pipe; i.e, CIP = cured in place

LOCATION

The approximate address location of the main or point feature.

MUNICIPALI (this field will be removed and info will be transferred to ADMINISTATIVEAREA field)

The codes of the name of the city where the water main is located i.e., PC = Panama City
SF = Springfield
CG = Cedar Grove
CNTY = Unincorporated Bay County
PRVT=Private

OPERATING_ (this field will be removed and info will be transferred to OPERATONALAREA field).

The service district/city in which the water main is located - in reference to maintenance, repairs etc (same codes as **MUNICIPALI) -**

LAST_STATU (this field will be removed and info will be transferred to INSTALLDATE field)

Date on which feature was installed or last repaired as seen on asbuilts

LIFECYCLESTATUS

Operating status of the feature i.e
ACT=Active
ABN=Abandoned
PRP=Proposed
NA=Not Active
UNC=Under Construction

WATERTYPE

The kind of water flowing in the pipe i.e
RAW= Untreated water
TW= Treated water

TYPE

The type of service used for the line feature i.e
IRR=Irrigation

HCU=Human Consumption, etc

DATE_INSTA
This is the installation date for analysis purposes
CONTRACTOR
The construction company that worked on the project
ENGINEER
The Engineering/Consulting company that designed the project
ASBUILT_RE (this field will be removed and info will be transferred to DRAWINGNUMBER field)
Additional information recorded on the asbuilts or construction plans.
DRAWINGNUMBER
Information as seen on asbuilts or construction plans.
PROJECTNUMBER
Additional information relating to the project as seen on the asbuilts.
WARRANTYDATE
Date feature warranty will expire
CONDITION
Condition of the feature as seen in the field while field verifying i.e.
NEW
LEAKING
EXPOSED etc
CONDITIONDATE
The date the feature condition was recorded/ this would be the same as GPS date.
INSTALLDATE
Date feature was installed or date on asbuilts
DATEMODIFIED
This is the date when feature was modified, could be the same as INSTALLDATE in some cases.

SOURCE
Place where information was gathered from, i.e AS=Asbuilts
UF=Utility Files
EP=Engineering Plans
LI=Located Information
MBK=Map book
COMMENT
More information related to the feature, can be good or bad
GROUNDSURFACETYPE
The surface where the feature is located i.e
DIRT=Dirt or grassy surface
PVD=Paved surface-asphalt
CONC=Concrete surface
PRESSURERATING
The maximum pressure a pipe is designed to withstand.

WORKREQUESTID

DESIGNID

WORKLOCATIONID

WORKFLOWSTATUS

WORKFUNCTION

Point Attributes defined

FITTING
Type of pipe fitting/joint used
TYPE
This is a description of the type of the pipe fitting, or valve type, or meter type
SIZE_
The size of the point feature
MANUFACTUR
The company that made the material
SCALE
ANNOTATION (this field will be removed and info will be transferred to COMMENT field)
Information to note about or around the feature
DEFECTS
Problems on the feature - compiled by the fire dept
PRESSURE_S
Hydrant flow test figures from the fire dept
NOMINAL_PR
Hydrant flow test figures from the fire dept
STATIC
Hydrant flow test value from the fire dept database.
RESID
Hydrant flow test value from the fire dept database.
PITOT
Hydrant flow test figure from the fire dept database
PITOT_2
Hydrant flow test figure from the fire dept database
PRESS_20_P
An average value from the Hydrant flow test - @20psi, from the fire dept database.
PRESS_10_P
An average value from the Hydrant flow test - @10psi from the fire dept database.
PRESS_0_PS
An average value from the Hydrant flow test - @0psi from the fire dept database.
DIAMETER
The diameter of the hydrant line in inches
MAINE_DIAME
The diameter of the main line
GPM
An average value from the Hydrant Flow Test done by the fire dept
DATE_
Date Hydrant Flow Tests were done
TIME_
Time Hydrant Flow Tests were done
SITE
The street direction on which the hydrant is located i.e N=North side

E=East side
W=West side
S=South side
SE=South East corner
NW= North West corner
SW=South West corner
NE=North East corner

DIRECTION (field will soon be removed)
The city direction in which the hydrant is located. i.e

E=East
W=West
N=North
S=South

STATION
The station that services the fire hydrant
ZONE_
The zone that services the fire hydrant
MARKER
A blue marker placed in the paved row to indicate existence of a fire hydrant. i.e., Y=yes, N=no
STEAMER
This usually is on the fire hydrant . i.e, Y=yes,
N=no
SERVICE_CO
The company that services the feature; meters or hydrants.
BARRELDIAMETER
Diameter of the hydrant barrel
NOZZLEDIAMETER1
Diameter of the 1st hydrant nozzle
NOZZELDIAMETER2
Diameter of the 2nd hydrant nozzle
NOZZLEDIAMETER3
Diameter of the 3rd hydrant nozzle if one exists
NOZZLEDIAMETER4
Diameter of the 4th hydrant nozzle if one exists
OUTLETCONFIGURATION
SEATDIAMETER
Diameter of the hydrant seat
OPENING

HOSECONNECTOR

STEAMERCONNECTOR

HYDRANTNUMBER
This is the number usually found on the hydrants

COLOR
The color of the hydrant i.e

RED=red
YELL=yellow

YR_MFG

Year hydrant was manufactured

VALVE_VISIBLE
Is the hydrant valve visible or not i.e

Y=Yes
N=No

IN METER FEATURE
LOCATIONDESCRPTION
This is addition location description in case address is not enough i.e under an oak tree etc.

GPS_DATE (Field will be removed and info will be transferred to CONDITIONDATE field)
Date feature was GPSed

IN SAMPLINGSTATIONS

DESIGNATIO (field will be removed and info transferred to LOCATIONDESCRIPTION field)
This is additional location description in case address is not enough i.e under an oak tree etc

ROUTE_NO
This field was transferred from the historic hard copy records of the feature.

IN SYSTEM VALVES
CROSSOVERVALVE

CLOCKWISETOCLOSE
Indicates that the valve must be turned clockwise to close it. i.e

Y = Yes
N = No

MOTORIZED
Indicates that the switch is motorized.

NORMALLYOPEN
Indicates that the valve is normally kept open i.e

Y = Yes
N = No

PRESSURESETTING
The pressure that the valve is set for, generally the maximum pressure allowed.

TURNSTOOPEN
The number of turns required in opening a valve

TURNSTOCLOSE
The number of turns required in closing a valve

IN WHOLESALE METER

METER TYPE
Type of meter – more to do with its make

FLOWRANGE
The range of flow for which the meter is accurate

MEASUREMENTDATE

Date flowrange (above field) was determined